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(71)Applicant : ASUKE YAKUHIN KK

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(72)Inventor : ASUKE KAZUHIDE

(54) DIABETES/HYPOTENSION/LEVER FUNCTION IMPROVER COMPRISING PANAX NOTOGINSENG, FRUIT BODY OF GANODERMA LUCIDUM AND AGARICUS BLAZEI MURILL AS MAIN COMPONENTS AND ITS PRODUCTION

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain the subject improver capable of being formed into a granular state without separately adding an excipient composed of a glucide such as lactose, etc., effective for improving diabetes, hypertension, liver function, etc., comprising dried powder of Panax notoginseng, fruit body of Ganoderma lucidum and Agaricus blazei Murill as main components.

SOLUTION: This improver is obtained by bonding (A) dried powder of Panax notoginseng, (B) dried powder of fruit body of Ganoderma lucidum and (C) dried powder of Agaricus blazei Murill as main components by using glucides contained in these components as binders and forming the bonded material into a granular state. The weight ratio of the contents of the component A, the component B and the component C is approximately 1:1:1. Preferably the improver is obtained through a mixing process for adding water to the component A, the component B and the component C and mixing them, a process for forming the mixture obtained by the process into a granular state and a process for drying the obtained granule. Preferably the weight ratio of the component A, the component B, the composition C and water is approximately 1:1:1:5.

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CLAIMS

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[Claim(s)]

[Claim 1] the desiccation powder of the Panax Notoginseng ginseng radix, the desiccation powder of Ganoderma, and agaricus -- the Panax Notoginseng ginseng radix characterized by having bound as a binder the sugar contained in these components in the desiccation powder of a mushroom, and carrying out size enlargement to granularity, Ganoderma, and agaricus -- the glycosuria, the hypertension, and the liver function improvement agent which uses a mushroom as a principal component.

[Claim 2] the desiccation powder of the Panax Notoginseng ginseng radix, the desiccation powder of Ganoderma, and agaricus -- the Panax Notoginseng ginseng radix according to claim 1 characterized by the weight ratio of the content of the desiccation powder of a mushroom being about 1:1:1, Ganoderma, and agaricus -- the glycosuria, the hypertension, and the liver function improvement agent which uses a mushroom as a principal component.

[Claim 3] the desiccation powder of a Panax Notoginseng ginseng radix, the desiccation powder of Ganoderma, and agaricus -- the Panax Notoginseng ginseng radix characterized by to include the kneading process which adds and mixes water to the desiccation powder of a mushroom, the process which forms in a granular object the mixture obtained at this kneading process, and the process which dries the obtained granular object, Ganoderma, and agaricus -- the manufacture approach of the glycosuria, the hypertension, and the liver function improvement agent which uses a mushroom as a principal component.

[Claim 4] said kneading process -- the desiccation powder of the Panax Notoginseng ginseng radix, the desiccation powder of Ganoderma, and agaricus -- the Panax Notoginseng ginseng radix characterized by for about 1:1:1:5 coming out comparatively, adding and kneading the desiccation powder and water of a mushroom by the weight ratio, Ganoderma, and agaricus -- the manufacture approach of of the glycosuria, the hypertension, and the liver function improvement agent which uses a mushroom as a principal component.

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## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

[0001]

[Field of the Invention] this invention -- the Panax Notoginseng ginseng radix, Ganoderma, and agaricus -- it is related with the glycosuria, the hypertension and the liver function improvement agent which uses a mushroom as a principal component, and its manufacture approach.

[0002]

[Description of the Prior Art] The Panax Notoginseng ginseng radix is also called alias name 37 ginseng radix, is the perennial herb of the Araliaceae ginseng radix group, and is the specialty of China Yunnan sentence Yamagata. The saponin of an active principle is contained no less than 7 to 12%. In addition, many DIN SHICHIN which has a flavon glycoside effective in cardiopathy and a hemostatic action, acetylene compounds with an anticancer operation, various essential amino acids, and other minerals are contained, and the drug effect is size.

[0003] moreover, agaricus -- a mushroom is a kind of Basidiomycetes which calls a scientific name Agaricus Blazei Murill (Agaricus blazeiMurrill), and belongs to the department of \*\*\*\*\* and eye \*\*\*\*\*. Although mainly produced in Brazil, artificial cultivation was attained even in Japan recently. agaricus -- a mushroom is a mushroom which is rich in protein with sugar including 40 - 45% of crude protein per dried food, 38 - 45% of sugar, 6 - 8% of fibers, 5 - 7% of crude ash, 3 - 4% of crude fat etc., etc. agaricus -- that a mushroom attracts attention is a point which contains macromolecule polysaccharide including beta-D-glucan in abundance. agaricus -- it does not remain in anti-cancer and antitumor, but an antiviral action, a blood-pressure adjustment operation, etc. are expected, and a mushroom is expected also from the improvement of a liver failure, diabetes mellitus, hypertension, etc.

[0004] Moreover, on the other hand, Ganoderma is called alias name MANNENTAKE and various drug effect, such as normalization of blood pressure, a blood vessel, and various organs, recovery of the immunity force, a balance-of-water improvement operation, and normalization of a central nervous system, is expected.

[0005]

[Problem(s) to be Solved by the Invention] an artificer -- the above-mentioned Panax Notoginseng ginseng radix and agaricus -- it examined offering the glycosuria, the hypertension, and the liver function improvement agent containing these three sorts in view of the drug effect of a mushroom and Ganoderma. Fundamentally, although desiccation and the thing which carried out disintegration are mixed, these three sorts of ingredients are made into granularity in order to make it easy to drink. In order to make it easy to corn in that case, it can \*\*, if excipients, such as a lactose, are mixed and size enlargement will be easily carried out to granularity. However, it inquired with the ability of an artificer not to corn somehow, without mixing an excipient, and hit on an idea to this invention.

[0006] namely, the Panax Notoginseng ginseng radix by which size enlargement was carried out to granularity, without the place made into the purpose of this invention using an excipient, Ganoderma, and agaricus -- it is in offering the glycosuria, the hypertension and the liver function improvement agent which uses a mushroom as a principal component, and the manufacture approach of this.

[0007]

[Means for Solving the Problem] This invention is equipped with the next configuration in order to attain the above-mentioned purpose. namely, the Panax Notoginseng ginseng radix concerning this invention, Ganoderma, and agaricus -- the glycosuria, the hypertension, and the liver function improvement agent which uses a mushroom as a principal component -- the desiccation powder of the Panax Notoginseng ginseng radix, the desiccation powder of Ganoderma, and agaricus -- it is characterized by having bound as a binder the sugar contained in these components in the desiccation powder of a mushroom, and carrying out size enlargement to granularity. the desiccation powder of the Panax Notoginseng ginseng radix, the desiccation powder of Ganoderma, and agaricus -- it is suitable that the weight ratio of the content of the desiccation powder of a mushroom sets to about 1:1:1. the Panax Notoginseng ginseng radix and agaricus -- a mushroom can carry out size enlargement to granularity, even if it does not add separately the excipient which consists of sugar, such as

other lactoses, by using the sugar contained in these ingredients, including sugar mostly, and the glycosuria, the hypertension, and the liver function improvement agent in which many active principles are contained can be offered.

[0008] moreover, the Panax Notoginseng ginseng radix concerning this invention, Ganoderma, and agaricus -- the manufacture approach of the glycosuria, the hypertension, and the liver function improvement agent which uses a mushroom as a principal component -- the desiccation powder of a Panax Notoginseng ginseng radix, the desiccation powder of Ganoderma, and agaricus -- it is characterized by to include the kneading process which adds and mixes water to the desiccation powder of a mushroom, the process which form in a granular object the mixture obtained at this kneading process and the process which dry the obtained granular object. said kneading process -- the desiccation powder of the Panax Notoginseng ginseng radix, the desiccation powder of Ganoderma, and agaricus -- it is suitable, if about 1:1:1:5 comes out comparatively, it adds and the desiccation powder and water of a mushroom are kneaded by the weight ratio. By adding and kneading water to ingredient powder, sugar is eluted underwater, and three sorts of powder is bound with drying after a granulation by making sugar into a binder, and it becomes granularity by it.

[0009]

[Embodiment of the Invention] Hereafter, the suitable example of this invention is explained to a detail based on an accompanying drawing. Drawing 1 shows a production process Fig. the Panax Notoginseng ginseng radix and agaricus -- inspection and after carrying out weighing capacity, each raw material with which a mushroom and Ganoderma were dried is ground, and is used as raw material powder.

[0010] subsequently, each raw material -- weighing capacity -- carrying out -- the desiccation powder of the Panax Notoginseng ginseng radix, the desiccation powder of Ganoderma, and agaricus -- it adjusts and mixes so that it may be set to about 1:1:1:5 by the weight ratio, and the desiccation powder of a mushroom and water are mixed by the mixer.

[0011] The extruded ingredient will become automatically granular, if the viscosity of the mixture in the above-mentioned ratio is quite high, and this is extruded so that the wire gauze of the cibration may be passed. This ingredient that became granular is put on a conveyor, the inside of a hot-air-drying furnace is passed, excess water is evaporated, and it is made to dry. Especially desiccation conditions are not limited.

[0012] Subsequently, it can provide as a product by sifting out the dried granular object in order to arrange grained magnitude, measuring by carrying out a microorganism test, and filling up a container.

[0013] as mentioned above, the thing for which water is added and mixed to the desiccation powder of a raw material -- especially -- the Panax Notoginseng ginseng radix and agaricus -- since sugar contains mostly in a mushroom, the sugar in a raw material is eluted in moisture, and after each raw material powder has been bound with drying a granular object by sugar, size enlargement is carried out to granularity. In addition, especially the amount of mixing of three sorts of raw material powder is not limited. for example, the Panax Notoginseng ginseng radix, Ganoderma, and agaricus -- a mushroom can also be set to about 2:2:1. It becomes good [ the ratio / water / of addition / about 2:2:1:9 ].

[0014] As mentioned above, even if it does not add an excipient like a lactose, since it can make to granularity by the sugar in a raw material, only the Hara end of each crude drug is included, and it can consider as the high thing of drug effect.

[0015] the Panax Notoginseng ginseng radix and agaricus -- as mentioned above, there is a powerful pharmacological action in a mushroom and Ganoderma. the Panax Notoginseng ginseng radix and agaricus -- there is powerful immunity activation force in a mushroom and Ganoderma, and it is effective not only in cancer but various adult diseases. It is based on the interaction of each crude drug. by the Panax Notoginseng ginseng radix and Ganoderma with a blood purification operation, it comes to be alike of blood smoothly and a blood flow becomes smooth. then, the blood volume of liver -- increasing -- agaricus -- beta glucan protein complex of a mushroom flows smoothly, and it is thought that work of liver is made active. There is drug effect also in alcoholic hepatitis or viral hepatitis. Since work of liver becomes active and the detoxication function of the body improves, the body which is tiring is upgraded. Drug effect is in the "chronic fatigue syndrome" which is increasing recently. Moreover, it is effective also in allergic diseases, such as digestive system diseases, such as illness of the circulatory system, such as hypertension, and cardiopathy, arteriosclerosis, hepatitis and liver cirrhosis, a gastric ulcer, and a duodenal ulcer, diabetes mellitus, a nephritis, and allergy student dermatitis. And since a crude drug is contained in the end of Hara, the drug effect to these diseases demonstrates drug effect also with the conjointly big interaction.

[0016]

[Effect of the Invention] according to this invention, it mentioned above -- as -- the Panax Notoginseng ginseng radix and agaricus -- a mushroom can carry out size enlargement to granularity, even if it does not add separately the excipient which consists of sugar, such as other lactoses, by using the sugar contained in these ingredients, including sugar mostly, and the glycosuria, the hypertension, and the liver function improvement agent in which many active principles are contained can be offered. Moreover, by adding and kneading water to ingredient powder, sugar is eluted underwater, and three sorts of powder is bound with drying after a granulation

by making sugar into a binder, and it becomes granularity by it.

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(71)出願人 398044558

足助薬品株式会社

長野県諏訪郡下諏訪町大沢8948の2

(72)発明者 足助 和英

長野県諏訪郡下諏訪町大沢8948の2 足助  
薬品株式会社内

(74)代理人 100077621

弁理士 織貫 隆夫 (外1名)

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(54)【発明の名称】 田七人参、靈芝、アガリクス茸を主成分とする糖尿・高血圧・肝機能改善剤およびこれの製造方法

(57)【要約】

【課題】 試形剤を用いずに顆粒状に試形された田七人  
参、靈芝、アガリクス茸を主成分とする糖尿・高血圧・  
肝機能改善剤を提供する。

【解決手段】 田七人参の乾燥粉末、靈芝の乾燥粉末、  
アガリクス茸の乾燥粉末をこれら成分中に含まれる糖質  
を粘結剤として結着して顆粒状に試形したことを特徴と  
している。

## 【特許請求の範囲】

【請求項1】 田七人参の乾燥粉末、靈芝の乾燥粉末、アガリクス茸の乾燥粉末をこれら成分中に含まれる糖質を粘結剤として結着して顆粒状に賦形したことを特徴とする田七人参、靈芝、アガリクス茸を主成分とする糖尿・高血圧・肝機能改善剤。

【請求項2】 田七人参の乾燥粉末、靈芝の乾燥粉末、アガリクス茸の乾燥粉末の含有量の重量比がほぼ1：1：1であることを特徴とする請求項1記載の田七人参、靈芝、アガリクス茸を主成分とする糖尿・高血圧・肝機能改善剤。

【請求項3】 田七人参の乾燥粉末、靈芝の乾燥粉末およびアガリクス茸の乾燥粉末に水を添加してミキシングする混練工程と、該混練工程で得られた混合物を粒状物に形成する工程と、得られた粒状物を乾燥する工程とを含むことを特徴とする田七人参、靈芝、アガリクス茸を主成分とする糖尿・高血圧・肝機能改善剤の製造方法。

【請求項4】 前記混練工程で、田七人参の乾燥粉末、靈芝の乾燥粉末、アガリクス茸の乾燥粉末および水を重量比でほぼ1：1：1：5の割合で添加して混練することを特徴とする田七人参、靈芝、アガリクス茸を主成分とする糖尿・高血圧・肝機能改善剤の製造方法。

## 【発明の詳細な説明】

## 【0001】

【発明の属する技術分野】 本発明は田七人参、靈芝、アガリクス茸を主成分とする糖尿・高血圧・肝機能改善剤およびその製造方法に関する。

## 【0002】

【従来の技術】 田七人参は別名三七人参ともよばれ、ウコギ科人参属の多年生草本で、中国雲南省文山県の特産である。有効成分のサポニンは、7～12パーセントも含まれている。その他、心臓疾患に有効なフラボン配糖体、止血作用を有するデンシチン、抗癌作用のあるアセチレン化合物、各種必須アミノ酸、その他ミネラル類等が多く含まれ、その薬効は大である。

【0003】 またアガリクス茸は、学名をアガリクス・ブラゼイムリル (*Agaricus blazei Murrill*) といい、はらたけ科、はらたけ目に属する担子菌類の一種である。主にブラジルで産出されるが、最近は日本でも人工栽培が可能となった。アガリクス茸は、乾物当たり粗蛋白40～45%、糖質38～45%、纖維質6～8%、粗灰分5～7%、粗脂肪3～4%等を含み、糖質とともに蛋白質に富むきのこである。アガリクス茸が注目されるのは、 $\beta$ -D-グルカンをはじめとする高分子多糖体を豊富に含む点である。アガリクス茸は、抗癌、抗腫瘍にとどまらず、抗ウイルス作用、血圧調整作用などが期待され、肝臓障害、糖尿病、高血圧などの改善にも期待される。

【0004】 また一方靈芝は、別名マンネンタケとよば

れ、血圧、血管、各種臓器の正常化、免疫力の回復、水分代謝改善作用、中枢神経系の正常化などの各種薬効が期待されている。

## 【0005】

【発明が解決しようとする課題】 発明者は、上記田七人参、アガリクス茸、靈芝の薬効に鑑み、これら三種を含む糖尿・高血圧・肝機能改善剤を提供することを検討した。基本的には、これら三種の材料を乾燥、粉末化したものを混合するのであるが、飲みやすくするために、顆粒状にする。その際、造粒しやすくするために、乳糖等の賦形剤を混合すれば容易に顆粒状に賦形することができる。しかしながら、発明者は賦形剤を混入せずに何とか造粒できないかと検討し、本発明に想到した。

【0006】 すなわち、本発明の目的とするところは、賦形剤を用いずに顆粒状に賦形された田七人参、靈芝、アガリクス茸を主成分とする糖尿・高血圧・肝機能改善剤およびこれの製造方法を提供するにある。

## 【0007】

【課題を解決するための手段】 本発明は上記目的を達成するため次の構成を備える。すなわち、本発明に係る田七人参、靈芝、アガリクス茸を主成分とする糖尿・高血圧・肝機能改善剤は、田七人参の乾燥粉末、靈芝の乾燥粉末、アガリクス茸の乾燥粉末をこれら成分中に含まれる糖質を粘結剤として結着して顆粒状に賦形したことを特徴としている。田七人参の乾燥粉末、靈芝の乾燥粉末、アガリクス茸の乾燥粉末の含有量の重量比がほぼ1：1：1とするのが好適である。田七人参、アガリクス茸は糖質を多く含み、これら材料中に含まれる糖質を利用することにより他の乳糖等の糖質からなる賦形剤を別途添加しなくとも顆粒状に賦形でき、有効成分が多く含まれる糖尿・高血圧・肝機能改善剤を提供できる。

【0008】 また本発明に係る田七人参、靈芝、アガリクス茸を主成分とする糖尿・高血圧・肝機能改善剤の製造方法は、田七人参の乾燥粉末、靈芝の乾燥粉末およびアガリクス茸の乾燥粉末に水を添加してミキシングする混練工程と、該混練工程で得られた混合物を粒状物に形成する工程と、得られた粒状物を乾燥する工程とを含むことを特徴としている。前記混練工程で、田七人参の乾燥粉末、靈芝の乾燥粉末、アガリクス茸の乾燥粉末および水を重量比でほぼ1：1：1：5の割合で添加して混練すると好適である。材料粉末に水を添加して混練することにより、水中に糖質が溶出し、造粒の後乾燥することで、糖質を粘結剤として三種の粉末が結着され顆粒状となる。

## 【0009】

【発明の実施の形態】 以下、本発明の好適な実施例を添付図面に基づいて詳細に説明する。図1は製造工程図を示す。田七人参、アガリクス茸、靈芝の乾燥された各原料を検査、秤量した後、粉碎して原料粉末にする。

【0010】 次いで各原料を秤量して、田七人参の乾燥

粉末、靈芝の乾燥粉末、アガリクス茸の乾燥粉末、および水を重量比で約1:1:1:5となるように調整、混合し、ミキサーでミキシングする。

【0011】上記比率での混合物はかなり粘性の高いものであり、これを篩状の金網を通過させるよう押し出すと、押し出された材料は自然に粒状となる。この粒状となった材料をコンベヤにのせ、熱風乾燥炉中を通過させて水分をとばし、乾燥させる。乾燥条件は特に限定されない。

【0012】次いで、乾燥された粒状物を粒の大きさを揃えるためにふるい分けし、微生物検査をし、計量して容器に充填することで製品として提供できる。

【0013】上記のように、原料の乾燥粉末に水を加えてミキシングすることで、特に田七人参、アガリクス茸には糖質が多く含有されることから、原料中の糖質が水分中に溶出し、粒状物を乾燥することで、各原料粉末が糖質により結着された状態で顆粒状に賦形される。なお、3種の原料粉末の混入量は特に限定されない。例えば田七人参、靈芝、アガリクス茸をほぼ2:2:1にすることもできる。水との添加の比率は2:2:1:9程度が良好となる。

【0014】上記のように、乳糖のような賦形剤を添加しなくとも、原料中の糖質で顆粒状になすことができるから、各生薬の原末だけが含まれ、薬効の高いものとすることができる。

【0015】田七人参、アガリクス茸、靈芝には前述したように、強力な薬理作用がある。田七人参、アガリクス茸、靈芝には強力な免疫賦活力があり、癌だけでな

く、各種成人病にも有効である。各生薬の相互作用による。血液浄化作用のある田七人参と靈芝により、血液はさらさらになり、血流がスムーズになる。すると肝臓の血液量も増え、アガリクス茸の $\beta$ グルカン蛋白複合体がスムーズに流れ、肝臓の働きを活発にすると考えられる。アルコール性肝炎やウイルス性肝炎にも薬効がある。肝臓の働きが活発になり、人体の解毒機能が向上していくので、疲れている体をパワーアップする。最近増えている「慢性疲労症候群」にも薬効がある。また、高血圧や心臓病、動脈硬化症などの循環器系の病気、肝炎や肝硬変、胃潰瘍、十二指腸潰瘍などの消化器系疾患、糖尿病、腎炎やアレルギー性皮膚炎などのアレルギー性疾患にも有効である。そしてこれらの疾患に対する薬効は、生薬が原末で含まれることから、その相互作用も相まって大きな薬効を発揮するのである。

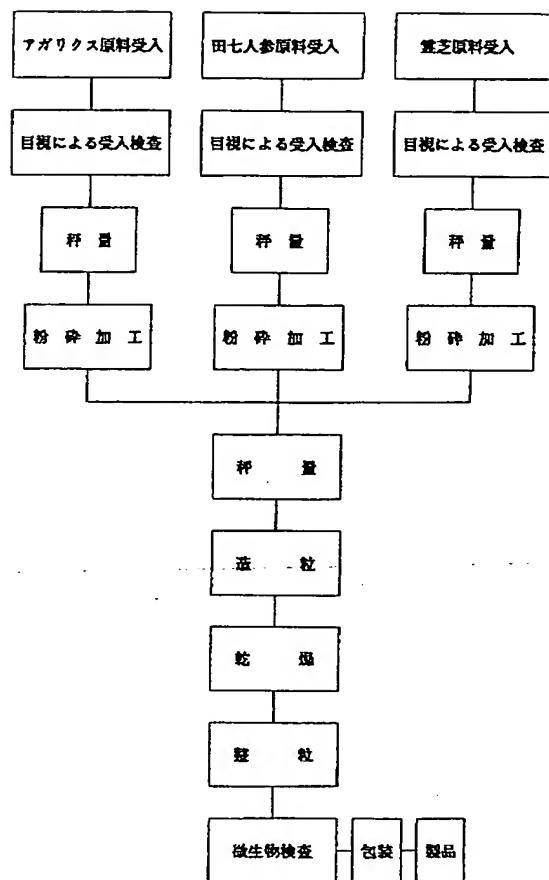
#### 【0016】

【発明の効果】本発明によれば、上述したように、田七人参、アガリクス茸は糖質を多く含み、これら材料中に含まれる糖質を利用することにより他の乳糖等の糖質からなる賦形剤を別途添加しなくとも顆粒状に賦形でき、有効成分が多く含まれる糖尿・高血圧・肝機能改善剤を提供できる。また、材料粉末に水を添加して混練することにより、水中に糖質が溶出し、造粒の後乾燥することで、糖質を粘結剤として三種の粉末が結着され顆粒状となる。

#### 【図面の簡単な説明】

【図1】製造工程図である。

【図1】



フロントページの続き

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